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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,270	06/21/2000	TOSHIHIRO SHIMIZU	106558	6415

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EXAMINER
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LUU, MATTHEW

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/598,270	<b>Applicant(s)</b> SHIMIZU ET AL.	
	<b>Examiner</b> LUU MATTHEW	<b>Art Unit</b> 3663	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 and 55-86 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-53 and 55-86 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Upon review of Applicants' arguments filed May 3, 2006, it is noted that a new restriction/election is warranted. Any inconvenience to Applicants is regretted.
2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-15 and 26, drawn to a vehicle drive assist system with traveling path-detecting means, classified in class 701, subclass 205.
  - II. Claims 16-18, 22 and 24-25, drawn to a vehicle drive assist system with a reverse gear mode detecting means, classified in class 180, subclass 6.38.
  - III. Claims 17, 21 and 23, drawn to an obstacle sensor, classified in class 340, subclass 435.
  - IV. Claims 20 and 27-30, drawn to a drive condition and drive mode judging means, classified in class 701, subclass 64.
  - V. Claims 31-52, drawn to a plurality of cameras, classified in class 348, subclass 148.

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- VI. Claims 56-59, drawn to front and back cameras, classified in class 340, subclass 901.
  - VII. Claims 60-65, drawn to a drive assist means with a display of the 3-dimensional information image, classified in class 345, subclass 420.
  - VIII. Claims 66-75, drawn to a parking position detecting means, classified in class 340, subclass 932.2.
  - IX. Claims 76-78, drawn to a plane model generating means, classified in class 340, subclass 903.
  - X. Claims 79-86, drawn to display means for displaying the image of the backward area picked up by the camera, classified in class 345, subclass 7.
3. The inventions are distinct, each from the other because of the following reasons:
- Inventions I, II, III, IV, V, VI, VII, VIII, IX and X are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, invention I has separate utility such as a vehicle drive assist system with traveling path-detecting

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means **without** a reverse gear mode detecting means, an obstacle sensor, a drive condition and drive mode judging means, a plurality of cameras, front and back cameras, a drive assist means with a display of the 3-dimensional information image, a parking position detecting means, a plane model generating means, and a display means for displaying the image of the backward area picked up by the camera. In other words, each one of the inventions recited in Groups I, II, III, IV, V, VI, VII, VIII, IX and X is separately usable in a system not having the other. See MPEP § 806.05(d).

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Upon election of invention I, II, III, IV, V, VI, VII, VIII, IX or X, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

- A. The embodiment of Figs. 1-7 (first embodiment).
- B. The embodiment of Figs. 8-9 (second embodiment).
- C. The embodiment of Fig. 10 (third embodiment)

- D. The embodiment of Figs. 11-18 (fourth embodiment).
- E. The embodiment of Figs. 19-20 (fifth embodiment).
- F. The embodiment of Figs. 21-22 (sixth embodiment).
- G. The embodiment of Figs. 23-25 (seventh embodiment).
- H. The embodiment of Figs. 29-30 (eight embodiment).
- I. The embodiment of Figs. 31-32 (ninth embodiment).
- J. The embodiment of Figs. 33-34 (tenth embodiment).
- K. The embodiment of Figs. 35-36 (eleventh embodiment).
- L. The embodiment of Figs. 37-40 (twelfth embodiment).

The species are independent or distinct because they have different embodiments.

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6. Upon election of invention I, the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

- (a) Wherein the drive assist means varies a brightness of the display only.
- (b) Wherein the drive assist means varies a color arrangement of the display only.
- (c) Wherein the drive assist means varies a brightness only or a color arrangement only.

7. Upon election of invention (a), (b), or (c), the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

- (1) Wherein the drive assist means displays the predictive traveling path and/or guide lines except the portions thereof near the vehicle.

- (2) Wherein the drive assist means displays the predictive traveling path and/or guide lines such that the portions thereof near the vehicle are broadened.

8. Upon election of invention (1) or (2), the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

- (i) Wherein the drive assist means displays a line indicative of a stop position of the vehicle at a position on the predictive traveling path and/or guide lines, where the line is located near the vehicle.
- (ii) Wherein the drive assist means displays a guide lines when braking is effected.
- (iii) Wherein the drive assist means displays a guide lines in the form of dotted lines.



9. Upon election of invention II, the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

A1. Wherein vehicle the drive assist means displays information in the form of character telop for the drive assist.

A2. Wherein vehicle assist means displays information in the form of color change of the entire display.

10. Upon election of invention V, the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

B1. Wherein the drive assist means changes the images from the plurality of cameras to be displayed on the display screen at a predetermined time interval.

B2. Wherein the drive assist means changes the images from one to another in accordance with a steering angle of turn of a steering wheel for steering the vehicle.

11. Upon election of invention B1 or B2, the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

(a1) Wherein when the obstacle sensor detects an obstacle, the drive assist means causes the display means to display an image from the camera picking up a sensing direction of the obstacle sensor.

(a2) Wherein when the obstacle sensor detects an obstacle, the drive assist means causes the display means to shift a display position of the image from the camera picking up a sensing direction of the obstacle sensor, to the center of the screen of the display means or to expand the display.

- (a3) Wherein the drive assist means causes the display means to overlay an alarm on a display of the sensing direction of the obstacle sensor.

12. Upon election of invention (a1), (a2), or (a3), the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

- (b1) Wherein the drive assist means causes the display means to display an image selected from the images picked up by the plurality of cameras.

- (b2) Wherein the drive assist means causes the display means to display the images output from the plurality of cameras having the photographing areas successively in scrolling manner.

13. Upon election of invention VIII, the applicant is further required under 35 U.S.C. 121 to elect on of the following disclosed species for prosecution on the merits to which

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the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

(c1) Voice guide means for carrying out a guide by the parking assist by voice.

(c2) Display guide means for visually presenting the guide by the parking assist together with the image by the camera.

14. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement (e.g., I, A, (a), (i), (A1), (Ba), (a1), (b1), and (c1) ), and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the

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case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUU MATTHEW whose telephone number is (571) 272-7663. The examiner can normally be reached on Flexible Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JACK KEITH can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Luu



**MATTHEW LUU**  
**PRIMARY EXAMINER**